

ABSTRACT

The invention provides an electrolyte whose battery capacity, cycle characteristics, load characteristics, and low temperature characteristics are all excellent, and a battery using it. A cathode and an anode are layered and wound with a separator and electrolyte layer in between. The electrolyte layer contains a high molecular weight compound and an electrolytic solution containing at least one from the group consisting of vinylethylene carbonate and its derivatives in the range of 0.05 wt% to 5 wt% in total. Therefore, chemical stability of the electrolyte layer is improved.

It is preferable that the electrolytic solution further contains ethylene carbonate and propylene carbonate by a mass ratio of ethylene carbonate:propylene carbonate=15-75:85-25.